

The Gulf Breeze

Padre Island National Seashore
News and Information, 2016

National Park Service
Department of the Interior





Welcome

to Padre Island National Seashore!

In 2016, the National Park Service celebrates 100 years of caring for some of the most treasured places in America. When thinking of a national park, many people picture the magnificence of the Grand Canyon, the geysers of Yellowstone, or the essence of wilderness set aside at Denali. These and other natural wonders protected as national parks—including Padre Island National Seashore—provide a nourishment for the soul that is beyond material value.

There are over four hundred national park sites which preserve not only natural beauty but ideas, feelings, and the shared stories of our nation. They connect us to each other through the power of place, objects, and people. There truly is something for everyone.

The National Park Service began to tell the story of Padre Island National Seashore in 1962. The park protects the longest stretch of undeveloped barrier island left in the world. We tell the stories of cattle ranching, Native Americans, and Spanish explorers and of protecting habitat for sea turtles, migratory birds, and coastal prairie plants. And the park preserves a place for us to relax, swim, fish, boat, windsurf, play, and camp under dark night skies. All of these have values that, while not easily defined, are nonetheless recognized and appreciated.

President Franklin D. Roosevelt once said “There is nothing so American as our national parks. . . The fundamental idea behind the parks. . . is that the country belongs to the people, that it is in process of making for the enrichment of the lives of all of us.”

It is an honor for us to care for one part of our nation’s heritage here on Padre Island and to be a part of the National Park Service Centennial. As we enter a second century of caring for these special places, we invite you to celebrate with us. Find and connect to your park. Connect in person or online. Enjoy it. Be inspired by it. Get involved and add your voice to the stories our future national parks will tell. I hope your visit to Padre Island National Seashore is enjoyable, enriching, and inspiring. On behalf of all of us at Padre Island National Seashore, thank you for your visit and support.

Mark Spier, Superintendent

Gulf Breeze

2016 Edition

An Annual Magazine from
Padre Island National Seashore
National Park Service
U.S. Department of the Interior

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Partners and Concessions

Increasingly, partnerships are an essential and effective means for the National Park Service to fulfill parts of our mission and foster a shared sense of stewardship that is crucial for our future. Padre Island National Seashore would like to thank its partners for the continued services they have offered to the park’s visitors throughout the years.

Western National Parks Association Nature Store, located inside Malaquite Visitor Center, is a nonprofit partner that provides support for park programs using proceeds from sales of educational books, field guides, games, and other items. Find out more at wnpa.org or by calling (361)949-8068.

Worldwinds Windsurfing, Inc., located at Bird Island Basin, offers lessons and rental equipment for windsurfing and kayaking. Find out more at worldwinds.net or by calling (361)949-7472.



GET THE SCOOP
on the Centennial!
Scan with the QR app
on your smart device!

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On the Cover: Newly hatched Kemp's ridley sea turtles dig their way up to the surface from beneath the sand. NPS photo by Lucy Guillen. On this page: A boy plays on Malaquite Beach at Padre Island National Seashore. NPS photo by Jody Mays.

THINGS

SWIMMING & SUNBATHING

With about 65 miles of beachfront, the park has plenty of space for swimming, sunbathing, & relaxing. Malaquite Beach & Visitor Center is a great place for families.

CAMPING

Whether you want to camp along the beach or the bay, near restrooms or in a remote area, we have camping opportunities for both tents & RVs (no hookups). Leashed pets are allowed in all camping areas. Check the Go-to Info on page 12 for more detailed information on camping and camping fees.

FISHING

Surf fishing is very popular & is allowed along over 60 miles of shoreline. You can also go wade fishing in the Laguna Madre at Bird Island Basin. All you need is a park entrance pass, your Texas fishing license & a saltwater stamp!

PICNICKING

The park is a great place for a picnic! Find picnic tables & shade at Malaquite Pavilion, on Malaquite Beach, & at the north end of the visitor center parking area.

BEACH DRIVING

Driving on the beach can be a fun adventure. Venture a short distance off the pavement, 20 miles south to Big Shell, or all the way to Mansfield Channel. Be aware that driving is at your own risk & most areas require 4-wheel drive. No off-road vehicles (e.g. ATVs) are allowed, & driving is allowed only on the beachfront.

HIKING & WALKING

Stroll on the beach anywhere along our 65 miles of shoreline. Beach wheelchairs are available free for loan for use at Malaquite Beach. Take a short walk through rare coastal prairie habitat on our accessible Grasslands Nature Trail.

TO DO

BOATING

The boat ramp at Bird Island Basin is a very popular site for launching into the Laguna Madre. To use the boat ramp at Bird Island Basin, you need both a park entrance pass (\$10 for 7 days or \$20/year) & a boat ramp pass (\$5/day or \$10/year).

BEACHCOMBING

Beachcombing for shells, sea beans, and other items is a fun way to enjoy the park's shoreline. You can collect shells, sand dollars, and other items as long as they are not alive. If you have a 4-wheel drive vehicle, Little Shell & Big Shell beaches can be especially productive areas for this activity.

WINDSURFING & KAYAKING

Bird Island Basin is one of the top windsurfing areas in the country. You can bring your own equipment or rent windsurfing or kayaking equipment there—you can even take lessons!

BIRDWATCHING

Padre Island is a major birding destination! Over 350 species live in or migrate through the park. We offer free seasonal birding tours and binoculars for loan. Discover the fun of birding!

ATTENDING A RANGER PROGRAM

We offer different programs at different times of year, from beach walks to evening programs to birding tours. Catch live creatures in the surf or earn your own Junior Ranger badge. Find out what we are offering right now at the Visitor Center (361-949-8068).

A Commitment to Restoration...

During 2016, the National Park Service is celebrating our Centennial. We are looking back with pride at the accomplishments that we have made during the last 100 years, and looking ahead to the future. This is a perfect time to reflect upon the work that we have conducted for nearly four decades to help restore the world's most endangered sea turtle species—the Kemp's ridley.

Kemp's Ridley—Then & Now

Padre Island National Seashore is home to the Kemp's ridley sea turtle, which comes ashore to nest from April through mid-July. In fact, more than half the Kemp's ridley nests found in the U.S. each year are located here.

Most Kemp's ridley turtles nest on the Gulf coast of Mexico, with the epicenter of nesting near the village of Rancho Nuevo. The Kemp's ridley population plummeted during the 1940s through the 1970s due to taking of eggs from the nesting beach in Mexico and incidental capture of juveniles and adults due to commercial fisheries. In 1974, concerned about the future of the species, the National Park Service proposed increased U.S. involvement in conservation efforts through protection of nesting turtles and nests in Mexico, and re-establishment of nesting at Padre Island National Seashore to form a secondary nesting colony

here as a safeguard against extinction for the species.

For nearly four decades, the National Park Service has worked with several other agencies in the U.S. and Mexico to help save this species from extinction. To help increase the local population and aid with species recovery, patrols are conducted to locate and protect nesting females and nests on Gulf of Mexico beaches in Texas. Eggs from most nests are relocated to either the Padre Island National Seashore incubation facility or large screen enclosures called corrals for protected care.

During 2015, 159 Kemp's ridley nests were found in Texas, including 101 at Padre Island National Seashore. Overall, more than 12,000 hatchlings from Texas nests were released during 2015. Twenty-three hatchling releases held at the National Seashore were open to the public and more than 12,000 people attended! Many traveled long distances and planned their vacation around the opportunity to watch a release.

Since 1979, 1,826 Kemp's ridley nests have been recorded in Texas, and more than 103,000 hatchlings have been released on Texas beaches from those nests. Eggs from nearly three-quarters of those nests were found at the National Seashore or brought here for protected care to help bolster the

secondary nesting colony, and the resulting hatchlings were released here.

Thanks to bi-national recovery efforts, Kemp's ridley nesting was increasing exponentially in Texas and Mexico through 2009 and population modelers expected that trend to continue for several more years. However, nesting declined dramatically in both areas during 2010. We were glad for an upturn in nesting during 2015 after two years of decline, but the 2015 nest total was much lower than the totals during 2009, 2011, and 2012. This is an alarming development that may indicate this species is no longer on the path to recovery and underscores the importance of our continued monitoring, conservation, and research efforts.

Future Plans

Several events will be held during 2016 to celebrate our long term involvement in the Kemp's ridley recovery program. A new Sea Turtle Celebration Festival will take place at the park. This new, annual event will include many fun, educational, and family-oriented activities. Also in 2016, a limited number of special, National Park Service Centennial versions of our plush Kemp's ridley hatchlings will be created. These stuffed animals will be offered for "adoption" as part of a special Centennial outreach effort.

Additionally, we will continue our long-term program to locate and protect nesting Kemp's ridley turtles and their clutches. We will retrieve the eggs for protected care and release the hatchlings back into the wild. We will hold about 20–25 hatchling releases that will be open to the public, between late May and mid-August, in front of the Visitor Center at the National Seashore. For more information about hatchling releases during 2016, visit our website at nps.gov/pais/ or Facebook page at [facebook.com/nps.pais.seaturtles](https://www.facebook.com/nps.pais.seaturtles), or call our recorded Hatchling Hotline at (361) 949-7163.

Please Help Watch & Report

Watch for sea turtles that are nesting, floating, or washed ashore (alive or dead), and report any that you see immediately by calling 361-949-8173, ext. 226 or notifying a passing turtle patroller. Be aware that nesters enter a trance-like state and are helpless and nearly motionless when laying eggs. Locating and protecting nesting turtles, nests, and stranded turtles will help greatly with recovery efforts for Kemp's ridley and the other four species of threatened and endangered sea turtles that occur at Padre Island National Seashore.

—Dr. Donna Shaver, Division of Sea Turtle Science & Recovery



Through the Eyes of a Volunteer

An Early Morning

How many reasons does one have for climbing out of a nice warm bed at 4:30 in the morning? Years past would have meant a fishing trip or a hike to a favorite deer blind, all for the pleasures of adding to an empty freezer or filling a vacant spot on the wall of one's man cave with a prized trophy.

Today will be far different from the past, for this will be a time of celebrating the birth and release of one of Mother Nature's true miracles: several clutches of newly hatched Kemp's ridley sea turtles. Before dawn, Biotechs, Rangers and volunteers gather to prepare a small area of beach in front of the Visitor Center at Padre Island National Seashore. Sargassum, a type of plant that originates off the east coast of Florida and sometimes develops a love affair for our Texas beaches, has to be shoved aside. Ghost crabs looking for an easy meal have their holes filled. With the beach ready, the crowds arrive for this amazing event.

As the sun peeks over the horizon, the hatchlings are released one at a time, some lethargic and needing a little persuasion and others ready to hit the water. Once safely in the surf, we wish them the best on their long voyage to adulthood and hope we might see the females again in the future as egg producing mothers.

This was the final chapter of many leading up to the release. As a volunteer, classroom time, UTV (utility task vehicle) driving classes, patrolling 70 miles of beach looking for turtles or their tracks, marking nests, egg removal to turtle labs, transportation, and many other opportunities are available to those who love hot weather, bugs, blowing sand, a rough ride, and a few extra unmentionables, all for the jackpot of spotting that first turtle or the tracks leading to a nest full of eggs. A day doing this sure beats a very good day at work, because yes, **I'M** on the beach.

Warm Greetings

Welcome to the Visitor Center (VC). A warm greeting awaits you from all the staff... Will Rogers once stated that he had never met a stranger; this is the way of thinking at the VC. People from all corners of the United States and many corners of the world have crossed our threshold and left enlightened with the warmth and beauty they have received and seen here.

Education becomes one of the most important things we can pass on to all of our visitors. Whether it is through a classroom format or something as simple as a brochure; education enhances preservation. This becomes the full time job for those associated with the VC. During the school year, children are bused here where classes are held on the deck and beach. Many tours are offered including birding, plant life, butterflies, turtles, and others geared towards both youth and adults.

Within the VC, history of the island is available through video and pictures along with a wide selection of books covering many subjects you would encounter while visiting our national park. Birding, seashells, sea beans, and plant life seem to be the most popular along with a large selection of items for children. A Junior Ranger program is offered 7 days a week for children. They are awarded a certificate and badge upon completion, which generally takes two to three hours.

The touch table is the area of most interest. A thin layer of beach sand cradles seashells, sea beans, bones, coral and other items that have found their way to our beaches by riding the oceans' currents. Mexico, Central and South America were home for many of them prior to hitching a ride to who knows where. This is where the personal contact becomes most interesting. Their eagerness to learn and being able to inform and answer their questions is overwhelming at times, but if you can't answer a question like "what is that?" there is always someone available to answer correctly. I would not trade it for anything because after all, I'M at the beach.



Volunteer Karl Vermace tells two visitors about items found at Padre Island National Seashore. NPS Photo.

—Karl Vermace, Padre Island National Seashore Volunteer

Nemesis

Agatha Christie fans know the name Nemesis from her famous murder mystery of the same name. Greek mythology students recognize Nemesis as the Goddess of revenge and retribution. To a marine biologist Nemesis would be a fitting name to apply to that most ruthless of killers—the sea star. The sea star....a ruthless killer? It is strange but true. While it doesn't hunt out of revenge or retribution, the docile-looking sea star is a remarkably efficient killer. An even greater surprise is that the sea star is able to kill in unimaginably devious ways and yet has no brain to do the plotting. It can't be called a "cold blooded killer" either since it has no blood—cold or otherwise! What goes on under the sea on an everyday basis at times is so strange it can sound like science fiction; yet that very oddball nature is what makes the sea fascinating and worthy of protection.

The strange life of the sea star typically begins with the male and female sea stars shedding their gametes into the water where fertilization takes place. The tiny creatures begin life as part of the plankton commu-



nity but eventually settle to the sea floor and transition into the recognizable form familiar to beach goers. That is when the danger begins for small clams, oysters, or other such bivalve animals. The hungry sea star creeps along the sea floor at the not-so-speedy pace of four to six inches per minute until they locate and capture their shelled prey, and then the clam or oyster must fight for its life.

How does a sea star open a clam? If a sea star is examined closely, on the top of the central disk that makes up the main body is a small, odd-looking, colorless spot known as the madreporite. This inconspicuous little spot is the primary intake for much of the water that assists in operating the hundreds of tiny feet ("podia") that the sea star "walks" upon. The podia also serve as



Podia on the underside of a sea star. Photo from Wikimedia Commons.



A sea star eating a clam. Photo from drizzle.com/~sunnym/other.htm

suction devices used to pry open the hapless clam victims for dinner. The water inside their hydraulically-powered system serves as a replacement for blood by carrying oxygen, carbon dioxide, and nutrients. It also provides some of the suction force needed to open a clam. Scientists recently discovered that the sea star can secrete chemicals from the tips of its feet that improve suction and create a tight seal, helping the sea star maintain its grip on the sides of the prey's shell.

The battle between sea star and clam may best be described as a prolonged arm wrestling match. The sea star feet suction onto both sides of the clam as the arms of the sea star wrap around it. Sensing danger, the bivalve closes its shell as tightly as possible. Much like a challenge between two well-matched arm wrestlers, the struggle is protracted. However, slowly but surely the sea star will gain the mechanical advantage since, unlike the clam which depends upon one muscle to remain closed, the sea star has independent control over, and can exert suction with, each of its hundreds of tiny feet. By releasing some of the feet to obtain a better grip while continuing to hold firmly

with the sucker-like feet, the predator is able to keep a consistent force and slowly pull the halves of the clam apart. Anyone who has ever tried to use an oyster knife to pry open a live clam or oyster knows what the sea star is up against!

Most sea stars only need to open the clam about the same width as a period on this page and then something really odd begins to happen. The sea star pushes its stomach out through its mouth and inserts the stomach through the tiny gap between the shell halves. It begins to dump in digestive juices that turn the muscles and organs of the clam into a soup that is absorbed through the stomach walls of the sea star eventually gutting the poor clam. Game over!

Call the sea star what you will—nemesis, predator, or simply a beautiful sea creature, in the end one cannot help but be awed by the majesty of the ocean. As Loren Eiseley said: "The sea, once it casts its spell, holds one in its net of wonder forever." That sense of wonder is truly what makes it so worthy of our protection.

—Buzz Botts, *Division of Interpretation*

GO-TO

CAMPING

You can camp at North Beach, Bird Island Basin, Malaquite Campground, South Beach, & Yarbrough Pass. Fees are charged for Bird Island Basin (\$5/night/campsite) & Malaquite Campground (\$8/night/campsite). These fees are in addition to the entrance fee. Those with Interagency Senior or Access passes get 50% off these fees.

Malaquite Campground is next to the beach. It has paved parking, designated sites, restrooms, cold water showers, picnic tables, & shade structures. Bird Island Basin is next to the Laguna Madre. It has gravel parking, designated sites, & vault toilets. All other camping areas are primitive, with no amenities, & require driving on the sand at your own risk. There are no hookups in the park.

All camping areas are open year-round. All camping is first-come, first-served (no reservations). Campers must get a permit from kiosks at the entrance to camping areas. Camping anywhere in the park is limited to 14 days at one time & no more than 56 days per calendar year. After each 14-day stay, all equipment & vehicles must be removed from the park for a minimum of 48 hours. No camping is allowed at the Malaquite Visitor Center beach or parking area.

DANGEROUS ANIMALS

Jellyfish & Portuguese man-of-war can cause a painful sting, even if they are dead—don't touch them. If stung, rub the area with a paste of meat tenderizer & vinegar, or pour hot water on it. Watch for allergic reactions, & seek medical attention if necessary. Stingrays sit on the sandy bottom & can inflict an extremely painful puncture wound. To help avoid them, shuffle your feet on the sandy bottom as you walk. Be aware that sharks also occur in the Gulf. To avoid rattlesnakes, stay out of the dunes, grasslands, & mudflats. First aid is available at Malaquite Visitor Center. In an emergency, call 911 (climb a dune for better reception).

FIREARMS

A 2010 federal law allows people who can legally possess firearms to bring them into national parks. It is the visitor's responsibility to understand & comply with all applicable state, local, & federal firearms laws. Federal law prohibits firearms in certain park facilities. These places are posted with signs at public entrances.

RVs

All camping areas are open to both tents & recreational vehicles (RVs). There are no public hook-ups anywhere in the park. Running generators is not allowed from 10 pm–6 am (quiet hours). An RV dump station & a potable water filling station are available to all visitors; find them along the entrance to Malaquite Campground.

RIP CURRENTS

Surf conditions can occasionally create rip currents. If caught in one, don't panic. Swim parallel to the beach until you are free from the flow pulling you out, then swim back to shore. Do NOT attempt to swim against the current pulling you out. Use caution when swimming, & never swim alone. No lifeguards are present.

HAZARDOUS ITEMS

Hazardous materials, from 55-gallon barrels of chemicals to medical waste, sometimes wash ashore. If you come across something hazardous, don't touch it. Note the location & alert a park ranger as soon as possible.

OFF-ROAD VEHICLES

Texas beaches are considered public highways. Only street-legal & licensed vehicles are allowed in the park. All-terrain vehicles (ATVs), utility task vehicles (UTVs), go-carts, golf carts, dune buggies, & other such vehicles are prohibited. Driving in dunes, grasslands, & mudflats is also prohibited. Be aware that driving on the beach is at your own risk. Most areas require a 4-wheel drive vehicle.

INFO

RESTROOMS & SHOWERS

Find restrooms & cold water showers on the deck at Malaquite Pavilion (no pets allowed). Pet friendly rinse-off showers and restrooms are at the northern end of the Visitor Center parking area. Vault toilets are located at Bird Island Basin & just before the end of the paved road to South Beach.

FEEDING THE BIRDS

Feeding gulls or other wildlife in the park is not allowed. It can cause them to approach people too closely, beg for and steal food, & be less able to survive on their own. It also increases the danger for newly hatched sea turtles because gulls, drawn to crowds hoping to be fed, may swoop down & take a hatchling.

BEACHCOMBING

You can pick up & collect up to a 5 gallon bucket full of seashells, sea beans, & other items each day as long as they are not alive. All living things are protected within the park. So if you find something alive (e.g. a hermit crab or living sand dollar) don't harm it, just leave it where it is.

PETS

Padre is pet friendly! Pets on a leash are allowed everywhere in the park except for Malaquite Pavilion & the portion of Malaquite Beach right in front of the visitor center. A sand trail from the parking area enables pet owners to access adjacent beaches. Find pet-friendly rinse-off showers at the northern end of the visitor center parking area. Please be courteous to other visitors and clean up after your pet. Pets must be on a leash no longer than 6 feet & under your control at all times.

ACCESSIBILITY

All restroom & shower facilities are accessible. Malaquite Pavilion has a ramp up to the deck & down to the beach. Those with mobility challenges can borrow a beach wheelchair free of charge to use on Malaquite beach. The Visitor Center has a touch screen display with closed captioned videos & assisted listening device compatibility. Grasslands Nature Trail is also accessible. Malaquite Campground has an accessible camping site & has a ramp from the campground down to the beach.

FIRES

Unless a fire ban is in effect, small campfires are allowed on North & South beaches. Campers at Malaquite Campground can build a campfire on the beach in front of the campground but not within the campground. No fires are allowed at Bird Island Basin (use the grills provided for cooking). No bonfires are allowed anywhere in the park. At Malaquite Beach, no campfires are allowed but visitors can bring their own grills to the picnic shelter located in the parking lot. No grills are allowed on the Malaquite Pavilion deck.

HUNTING & FISHING

Fishing is permitted everywhere in the park except for the portion of Malaquite Beach right in front of the visitor center. No hunting is permitted in the park except for the taking of waterfowl by boat only out in the Laguna Madre. Both of these activities must be done in accordance with applicable state & federal regulations. Transporting any other lawfully taken wildlife, including exotic species, through the park is prohibited.

TRASH & RECYCLING

Due to illegal dumping of hazardous materials, trash cans are no longer provided in many areas of the park. Free trash bags are available at the park entrance station & at Malaquite Visitor Center. Dumpsters, trash cans, &/or recycling containers are located at Malaquite Pavilion, the entrance to South Beach, & Bird Island Basin. Please don't leave trash on the beach, bury it in the sand, burn it, or toss it into the dunes. Help make your park beaches beautiful by practicing "leave no trace"—if you bring it in, take it back out.

METAL DETECTORS

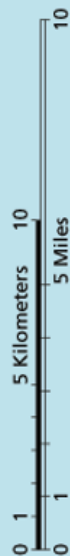
Possession or use of a metal detector is not allowed anywhere in the park in order to preserve & protect cultural resources.

GULF OF MEXICO



Padre Island National Seashore





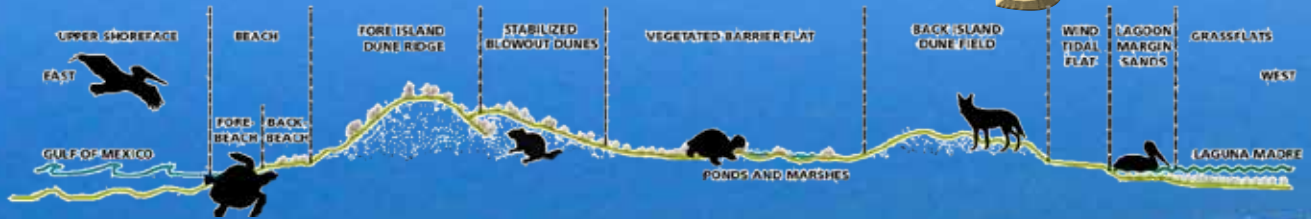
Natural areas within Padre Island National Seashore



ational Seashore



From Gulf to Laguna



No more than a mile wide, 110 miles long, and surrounded by saltwater, Padre Island is a harsh environment. Nearly constant winds, shifting sands, and the ebb and flow of the tides continually sculpt the landscape. The island can change overnight and can be a difficult place to survive, yet many plants and animals have adapted to these conditions. From the Gulf coast to the Laguna Madre, the island is teeming with life. As we move from one shore to the other, we find animals that have adapted to not just survive but thrive in the harsh environments of Padre Island.

NPS graphic by Beverly Benavidez



Gulf

Flocks of brown pelicans, known as squadrons, soar up and down the Gulf coast as if flying on patrol. Referred to as the “Padre Island Airforce”, these unique and massive birds glide effortlessly overhead, making precise and calculated moves.

The brown pelican typically hunts from the air, flying over the waves in search of fish near the surface. Once it spots a target, it plunges quickly and with great force into the water, often submerging completely. Built-in air sacs cushion the water’s impact and act as a life preserver to bring the bird back up to the surface. The elastic pouch in its lower bill can hold 3 times as much as its stomach. The pouch can expand to scoop up 2–3 gallons of water and, with any luck, a few fish. A hook at the tip of the bill keeps the fish from getting out as the pelican drains the saltwater from its mouth.

Too much salt in the pelican’s body can be toxic. To reduce the amount of salt it ingests, the brown pelican has grooves on the outside of its bill that direct saltwater down and away from its mouth. It also has special glands that extract salt from its system.

Brown pelican. Wikimedia Commons.



Beach

Salt-extracting glands are the reason why, between April and mid-July, you might see a Kemp’s ridley sea turtle “crying” on the beaches of Padre Island. Sea turtles have no need for fresh water and stay hydrated from their diet. Like most marine animals, they need to get rid of excess salt in their bodies. Sea turtles are able to secrete a salty fluid from their eyes, making them look as if they are crying. These tears also help clean the windblown sand and other debris from the female’s eyes during nesting.

Padre Island is a popular location for Kemp’s ridley sea turtles to nest. They are the smallest of the five sea turtle species found in the Gulf. At 10–15 years old, the female is able to navigate her way back to nest on the same beach she journeyed across as a hatchling. She can use the island’s harsh conditions to her advantage by nesting when high or rough tides help carry her up the beach or when windy conditions quickly erase the evidence of her nest, hiding it from predators.

Kemp's ridley. NPS photo.

Dunes

Just beyond the beach, in the grass-covered dunes, the spotted ground squirrel digs a burrow that serves as a home and shelter from the harsh elements. Shy but playful, ground squirrels are very adept at surviving in a seemingly desolate place. They change their diet to the available food, munching on grasses, seeds, grains, and nuts. They even get an occasional insect or caterpillar. If a snake or other predator approaches, ground squirrels warn each other with whistling calls and foot stomps. If startled, they quickly retreat to the safety of their burrow. They seem to disappear during the island's short winter season, but they actually hibernate in their burrows during that time.



Spotted ground squirrel. Photo by Kyle Christensen.

Wetlands

Hidden behind the dunes lies the key to survival on an island surrounded by salt water. Rain-water collects in low-lying grasslands and sits on top of the saltwater table, creating a mosaic of fresh water ponds and other wetland habitats. Often temporary and dependent on rain, such wetlands make a great home for the red-eared slider. This pond turtle often sunbathes at the water's edge to regulate its body temperature. Its shell is beveled, making it easier to slide back into the water if danger approaches. Unlike sea turtles, the red-eared slider can also tuck its head and feet into its shell for protection. Contrary to popular belief and depictions in old cartoons, it cannot take off or leave its shell—no turtle or tortoise can. The shell is part of its body and includes the spine and ribs.



Red-eared slider. NPS photo.

Prairies

Between and among the wetlands, coastal prairies offer cover for many animals, including the coyote. Coyotes are experts at adapting to a wide range of conditions. They can disappear behind what seems like little cover. They eat almost anything opportunity brings their way—deer, birds, mice, ground squirrels, seeds, even food left unguarded by humans. If wetlands dry up due to lack of rain, coyotes can dig a hole nearby to find water, creating a new water hole that helps deer and other wildlife survive drought conditions.



Coyote. Wikimedia Commons.

Laguna

As we move westward, the mosaic of coastal prairies and wetlands gives way to wind tidal flats that dot the edges of the Laguna Madre. Plovers, herons, and other birds find food and habitat here. Visitors to Bird Island Basin might also spot the graceful and majestic white pelican. This counterpart to the brown pelican seems very similar, but there's a reason why white pelicans are typically found in the Laguna Madre and not in the Gulf.

On the ground, both white and brown pelicans look clumsy walking around with their long bills and short legs. They quickly transition from awkward to graceful as they take flight or move to the water. While brown pelicans nosedive into the turbulent waters of the Gulf for their food, white pelicans specialize in hunting the calm, shallow waters of the Laguna Madre. They float gracefully on the surface, dipping their bills down to scoop up food. On occasion a group of white pelicans will work together to herd fish into the shallows, encircling and scooping them up.



White pelican. NPS photo.

Padre Island is dynamic and changes dramatically from the Gulf to the Laguna yet an amazing variety of plants and animals call this narrow strip of land and water home. During your next visit to Padre Island National Seashore, take a moment to discover the wonders of all the habitats of this national park, from shore to shore.

Bringing Art Back into

the

Park



Artwork by Tyler Hudock.



Artwork by park visitors!

Art in the parks has a long history. One of the founding fathers is Thomas Moran, a painter whose iconic images of Yellowstone helped convince President Grant that it was an area that needed to be protected. President Grant signed the first National Park into law because of the beauty these paintings captured. Some of this country's most pristine natural landscapes are currently protected by the National Park Service (NPS). They have inspired many artists throughout the years to produce incredible works of art.

Over 30 National Parks currently host Artists-in-Residence. To help celebrate the NPS Centennial and the long tradition of arts in the parks, Padre Island National Seashore joined these parks with a program I headed up as a Centennial Volunteer Ambassador. On October 19, Padre Island welcomed its first ever Artist-in-Residence, Tyler

Hudock! He developed a project to involve the local community in the process of creating a mural. It began with a selection of sketches for the park to choose from. Once the sketch was selected, a small scale canvas painting was created. This painting was pixelated and 30 representative colors were selected from it. This essentially turned the entire thing into a giant paint-by-numbers. The public was invited to come and help paint all the squares. Participants ranged in age from toddlers all the way to grandparents and beyond. It was great to see a lot of homeschoolers show up as well. Many people would come by to paint, leave to spend some time at the beach, and then return to paint more. It took a huge group effort to get this project done on time and we could not be more pleased with the result!

—Jessica Landis, Centennial Volunteer Ambassador

Artist's Corner



Tyler Hudock at work. NPS photo by Jessica Landis.

I am very excited to have been a part of the first "Artist in Residence" program at Padre Island National Seashore. I loved the enthusiasm that so many of the participants showed in the project. The National Parks are a great venue for community art projects.

Many visitors collect stamps, pins and memorabilia from National Parks. What visitor would not want to leave their own lasting mark on a park in the form of a mural? I am proud to continue the tradition and involve the public in the creative process. All participants have left with a greater sense of attachment to Padre Island National Seashore because of their time spent creating a lasting and iconic piece of community artwork.

A handwritten signature in black ink, appearing to read "Tyler Hudock".

A New Frog for Padre!

For many years, Rangers at Padre Island National Seashore have been puzzled by the calls of a particularly elusive frog. Auditory calls, or vocalizations, are often recorded and used by scientists to identify species of hard-to-find amphibians. Many recordings were taken over the years of this particular frog in the park. As it continued to evade capture, multiple amphibian experts were consulted, however no one could make a definitive identification of the call. This mystery has eluded scientists for over a decade, until recently.

The summer months of 2015 were uncharacteristically rainy. The average annual rainfall for Padre Island National Seashore is approximately 32 inches; however in 2015 the park received over 53 inches. Frogs rely on freshwater for reproduction; rangers knew that the increase in surface water created a unique opportunity to study these amphibians. Additional vocalizations were recorded after rainstorms, but observing the frogs in the wild was still proving tricky. Finally on August 6, 2015, after years of painstaking work to capture and document these frogs, Park Ranger Alicia Walker finally spotted and was able to collect one.

The captured frog was identified as the Eastern Narrow-mouthed Toad. Experts were contacted to validate the identification because no historical records existed for this species from Mustang Island, North Padre Island, South Padre Island, Nueces County, or any of the counties to the south. Narrow-mouthed Toads are very secretive, very small, and live mostly underground. They feed on a variety of insects but primarily eat ants. These elusive frogs breed on rainy summer nights where they congregate at temporary, fishless water bodies. This is where rangers began trapping for more specimens, documenting every step of the process. After a month of trapping, 66 individuals were captured and confirmed as Eastern Narrow-mouthed Toads.

Additional research is now needed to understand why the distribution of this species has shifted so significantly. Further genetic research is also needed to discover why the population in the park has such a unique call. Nonetheless, this is an exciting new discovery for Padre Island National Seashore.

—Alicia Walker, Division of Resources Management



Use the QR scan app on your smart device & check out this frog's call!



Senator Ralph Webster Yarborough. NPS archives photo.

RALPH YARBOROUGH: CHAMPION OF PADRE ISLAND

Many who travel down island are familiar with Yarborough Pass, a 4-wheel drive access to the Laguna Madre located 15 miles south of Malaquite Beach. This pass was named after W.O. Yarborough, a Texas Game, Fish and Oyster Commissioner. But it was Ralph Yarborough who was instrumental in establishing Padre Island National Seashore.

Ralph Webster Yarborough, a Texan, served in the U.S. Senate from 1957–1971. A champion of natural resources in Texas, he was a major player in the creation of Big Thicket National Preserve, located near Beaumont, TX. He also co-wrote the Endangered Species Act.

Yarborough began a legislative effort for the

establishment of a Padre Island National Park (later changed to "National Seashore"). Senator Yarborough quoted the earlier Park Service survey, *Our Vanishing Shoreline*, when introducing the bill to the Senate on June 27, 1958. He called the island "a place of undying historic charm...one of the most desirable semitropical rest spots in the world." The Senator celebrated "the golden sands of Padre Island and the white-capped blue waters of the Gulf of Mexico."

Yarborough's bill was the subject of much debate and push-back. Private land owners were told, "This land could make such a killing it would make Florida's oil boom look like chicken feed." Mineral owners had concerns about their right to explore, and politicians argued the size of the proposed park.

One of the strongest opponents arguing against the creation of the National Seashore was fellow Texas Senator Lyndon B. Johnson. His opposition to the bill stemmed from his dislike of the junior Senator Yarborough and his deep seated opposition to the whole idea of a national seashore.

After he became Vice President in the Kennedy administration, Lyndon Johnson continued to assert his power to prevent Congressional approval of Yarborough's legislation. At one point, Johnson approached Yarborough and proposed a compromise. If Yarborough would agree to a much smaller park,



Vice President Richard Nixon and Senator Lyndon B. Johnson swear Ralph Yarborough in as a Senator. NPS archives photo.

Johnson would support it and would even arrange for the small park to be named after Yarborough. The junior Senator refused, holding true to his commitment to preserve and protect the natural world for all to enjoy.

Yarborough caught a break when Johnson left Washington for a tour in Southeast Asia. A vote was held during Johnson's absence, and the legislation passed.

On September 28, 1962, in the presence of Senator Yarborough and Vice President Johnson, President Kennedy signed the bill and established Padre Island National Seashore.

Thanks in large part to the dedication of Ralph Yarborough, the longest stretch of

undeveloped barrier island left in the world was preserved as a seashore "unimpaired, for purposes of public recreation, benefit, and inspiration." It provides habitat for an incredible diversity of plants and animals. Visitors from around the world come for leisure and inspiration along the "golden sands" and "white-capped blue waters" of Padre Island National Seashore.

—Travis Clapp, Division of Resources Management

References:

Jones, W. Dwayne. 1999. Padre Island National Seashore: An Administrative History.

Mark Odintz, "YARBOROUGH, RALPH WEBSTER," Handbook of Texas Online.



President John F. Kennedy signs legislation establishing Padre Island National Seashore in 1962. NPS archives photo.

THE PADRE ISLAND OF THE PAST

The story of the earliest peoples of Padre Island is closely tied to and influenced by the formation and geology of the island itself.

All of the geologic evidence shows that Padre Island is a fairly recent formation, consisting of a bed of sand resting on a former land surface. Geologic studies show that during the most recent ice age (85,000–11,000 years ago), the ocean level was significantly lower because large amounts of water were frozen into extensive glacier formations. The Texas shoreline was much farther eastward in what is now the Gulf of Mexico.

As the glaciers melted, sea level rose and the shoreline retreated backward toward the present mainland. Padre Island began to form around 3000 BCE when the sea level had risen to within 20–30 feet of its present level. By 2000 BCE a series of offshore islands developed and later merged to form what is now Padre Island. It was during this time that Padre Island became suitable for human habitation.



A dart point from the Aransas Focus group. NPS photo.

The first prehistoric mainland inhabitants to visit the Island were from the Archaic Period or “Meso-Indian Period” (8000–2000 BCE). These earliest inhabitants most likely lived on the mainland and visited the island intermittently in order to take advantage of the abundant coastal food resources such as fresh fish and shell fish.

The various cultures from this period are referred to as the Aransas Focus (3000 BCE–1000/2000 CE) and are characterized as being adapted to a coastal environment and confined to the areas around Aransas and Corpus Christi bays. This group is a pre-pottery

phase and ancestors to later Karankawan groups. Artifacts from this group include stemmed and unstemmed projectile or dart points used on thrown and handheld spears. The end of this Archaic Period is defined by the adoption of settled farming, this date varying across the Americas.



Arrow points from the Rockport Focus group. NPS photo.

The next period of human prehistoric occupation is known as the Neo-American Period. This period is usually marked with the development of the bow and arrow, permanent settlements and agriculture, and the use of pottery and weaving. The first culture from this period is called the Rockport Focus (CE 1000–1500). They inhabited the Texas coast from Matagorda to Baffin bays and are linked to the Karankawa and other southern Texas coastal tribes. Artifacts from this group include smaller, stemmed arrow points and pottery shards.

The second Neo-American culture defined locally from the later prehistoric period is known as the Brownsville Focus (CE 1200–1500). This culture is associated with sophisticated shell workings, elaborately marked pottery, and triangular arrowpoints. Artifacts of this type are present on the island and Oso Bay. Early studies theorized that this culture may have overlapped into later Karankawan and other coastal groups. Later studies show that Karankawans were part of the Rockport Focus while Coahuiltecans were linked with the Brownsville Focus. These two local cultures marked the end of prehistory.



Arrow points from the Brownsville Focus group. NPS photo.

The beginning of the historic period of the island is marked by the primary contact between Karankawa and Spanish explorers. This first historic period is known as the Protohistoric Period (CE 1500–1600). The major event of this period was the arrival of the Spanish. In 1519, Alonzo Álvarez de Pineda became the first European to explore and map the Texas coast. In 1554, three Spanish Plate Fleet ships were lost near Padre Island as they traveled from Veracruz to Havana.



Crossbow from 1554 Spanish shipwreck on Padre Island. NPS photo.

The Early Historic Period (CE 1600–1879) that followed was a period of profound change. In 1682, La Salle discovered the mouth of the Mississippi and claimed the area for France. In 1685, he established Fort Saint Louis on Lavaca Bay. The Spanish reacted to this threat on territory they had claimed for Spain with expeditions on land and coastline patrols from 1686–1689 in an attempt to locate the French fort. European presence led to irrevocable changes in the landscape and for the native cultures of the area.

In 1821, Padre José Nicolas Balli established a cattle ranching operation on Padre Island, known at that time as the Isla de Santiago land grant. Cattle would remain on Padre Island from that point until 1970.



Cattle grazing on Padre Island. NPS photo.

The last major episode of the Early Historic Period occurred in February of 1846, when Zachary Taylor sent Captain William Hardee and an expeditionary force of about 25 men southward down Padre Island to scout a potential route to Matamoros during the Mexican–American War.

The beginning of Padre Island's Historic Period begins in 1879, when the entire island came under the control of cattle rancher Patrick Dunn. And the rest is (current) history.

—Charles Sassine, *Division of Resources Management*

References:

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Campbell, T.N. 1964. Appraisal of the archaeological resources of Padre Island, Texas. University of Texas, Department of Anthropology. Austin, TX.

**Aerial photography of
Padre Island National Seashore
(Northern 10 miles of park)**



Source: Esri, DigitalGlobe, GeoEye,
Earthstar Geographics, CNES/Airbus
DS, USDA, USGS, AEX, Getmapping,
Aerogrid, IGN, IGP, swisstopo, & the
GIS User Community

**Aerial photography of
Padre Island National Seashore
with simulated 1 meter sea level rise
(Northern 10 miles of park)**



1 meter sea level rise

- Simulated 1 Meter Sea level Rise
- Park Boundary



0 0.5 1 2 3 4 Miles



This data was extracted using
LiDAR and DEM data. This data
is for display purposes only.

—map by Travis Clapp, Division of Resources Management

COULD THIS BE THE PADRE ISLAND OF THE FUTURE?

Barrier islands are a place for escape, valued for their views and beauty, a place where people go for recreation and retirement. These islands are the shields that protect the mainlands and cities from storms and provide habitat for many species of plants and animals, and these places are slowly disappearing under water. Scientists agree that in the next century it is very likely that we will see a one meter rise in our sea level, which is just over three feet higher than the current level. This one meter rise will cause profound alterations to the landscape and ecosystems of the Gulf of Mexico's barrier islands.

They say a picture is worth a thousand words, but when the picture depicts millions of dollars in damage and a severe loss of land what is its worth then? Maps can show us just how much of the National Seashore lies below the one meter mark to help us visualize how much of the park would be gone if the sea level were to rise as scientists project. This modeled map gives us an idea of how the northern ten miles of the seashore would look, and just how much of it would be lost.

All the mudflats and their algal mats are gone. These are part of the base of the food web for both Laguna Madre and island life. If you take away the base, things start to crumble. Most of the southern third of Padre Island (not shown on the map) is now part of the ocean. Favorite beach spots for wade fishing have become the favorite spots of fish instead. The dunes and grasslands where badgers, coyotes, jackrabbits, and many other animals made their homes, lost. There will be no place for migrating birds to stay and rest. Laguna waters now flow over what was once Bird Island Basin; the campground, the parking lot, the boat ramp. A few lone peaks of dunes rise out of the surrounding sea, tiny islands where life may continue to cling. Barring strong storms, these small peaks may collect seaweed and sand and begin to grow again. Maybe.

We are looking at a completely different island and coastal bend geography. Areas of the King ranch are ocean front, and without the protection of the barrier island these areas will face devastation from hurricanes and other large storms. Disappearance of the Laguna Madre's sea grasses and aquatic nursery habitats will lead to loss of many marine species, including commercial fisheries like shrimp.

These are all projections and estimates for the future; we could see this one meter sooner or later depending on how people look at their world and take action. If we make a concerted effort to decrease our carbon consumption and adapt our coastal communities for the eventual changes we will face, then we could see a delay in the rate of sea level rise. More energy efficient appliances and vehicles, more recycling and reusing, and even something as simple as switching the type of light bulb can make a change. Little changes add up, and lots of little changes can make a big difference.

—Lindsay Galland, Division of Interpretation



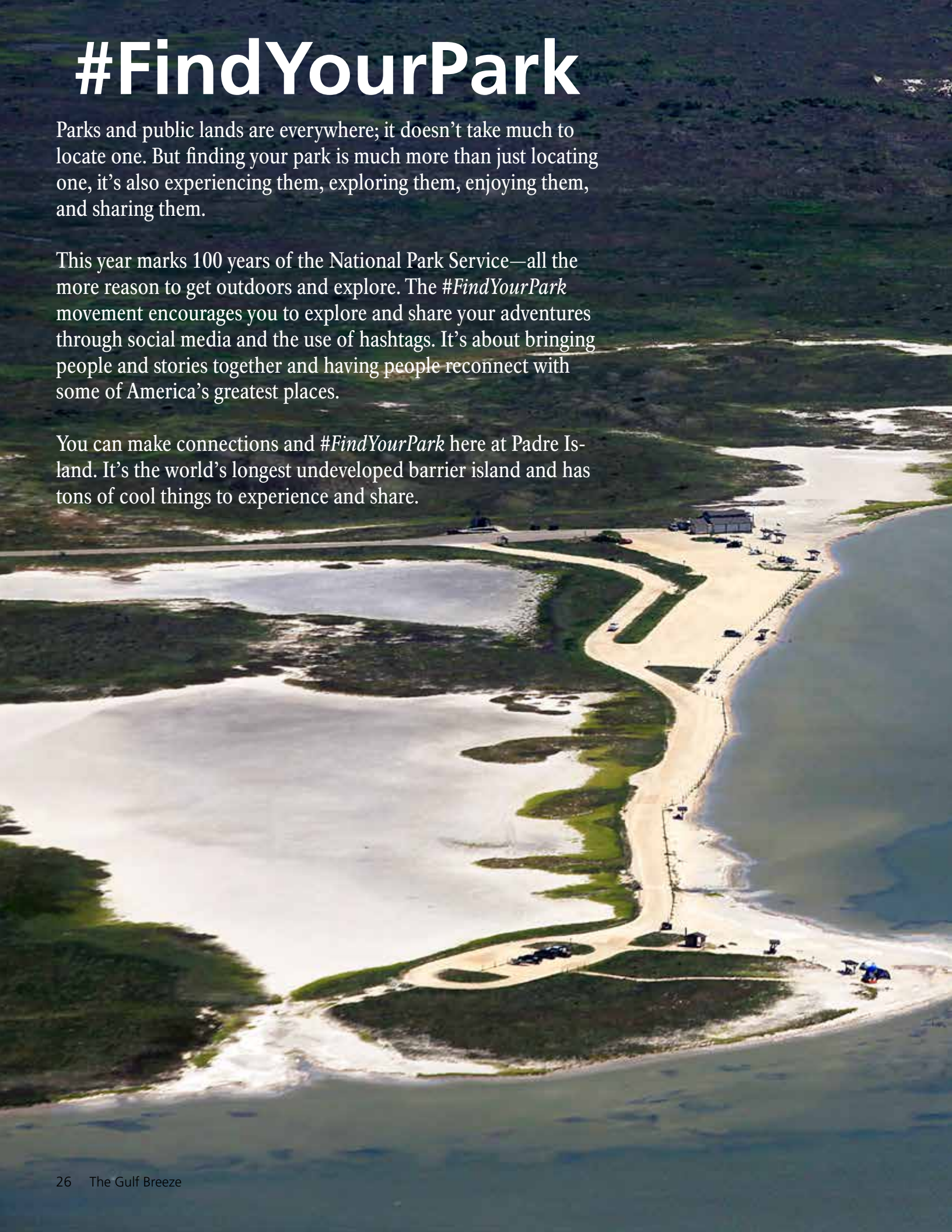
Could this be a glimpse of Padre Island's future? This aerial photo was taken of Padre Island, at mile marker 57 near Mansfield Channel, after the tidal surges of Hurricane Bret in 1999. NPS Photo.

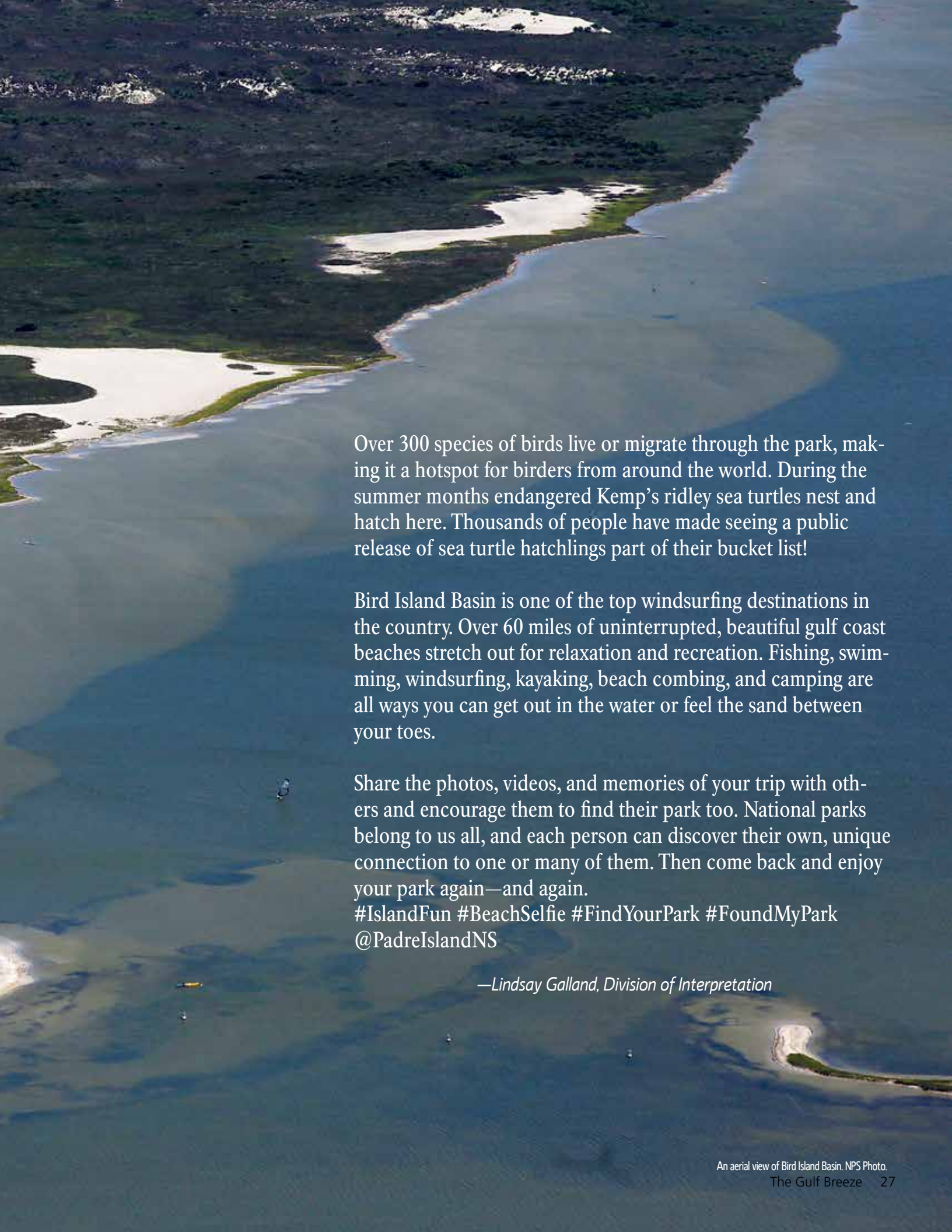
#FindYourPark

Parks and public lands are everywhere; it doesn't take much to locate one. But finding your park is much more than just locating one, it's also experiencing them, exploring them, enjoying them, and sharing them.

This year marks 100 years of the National Park Service—all the more reason to get outdoors and explore. The *#FindYourPark* movement encourages you to explore and share your adventures through social media and the use of hashtags. It's about bringing people and stories together and having people reconnect with some of America's greatest places.

You can make connections and *#FindYourPark* here at Padre Island. It's the world's longest undeveloped barrier island and has tons of cool things to experience and share.





Over 300 species of birds live or migrate through the park, making it a hotspot for birders from around the world. During the summer months endangered Kemp's ridley sea turtles nest and hatch here. Thousands of people have made seeing a public release of sea turtle hatchlings part of their bucket list!

Bird Island Basin is one of the top windsurfing destinations in the country. Over 60 miles of uninterrupted, beautiful gulf coast beaches stretch out for relaxation and recreation. Fishing, swimming, windsurfing, kayaking, beach combing, and camping are all ways you can get out in the water or feel the sand between your toes.

Share the photos, videos, and memories of your trip with others and encourage them to find their park too. National parks belong to us all, and each person can discover their own, unique connection to one or many of them. Then come back and enjoy your park again—and again.

#IslandFun #BeachSelfie #FindYourPark #FoundMyPark
@PadreIslandNS

—Lindsay Galland, Division of Interpretation



Padre Island National Seashore

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